MarkEn
The Mark of Excellence

REFRIGERATED CENTRIFUGE

Quality, Management, Environment, Health & Safety Standards

CDSCO MD 5 License

USFDA Listed

European CE

ISO 9001: 2015
IAF

ISO 13485:2016
NABCB/IAF

ISO 45001 : 2018
IAF

7 Electric Safety Certifications

IEC 60335-1 and IEC 60335-2-24, IEC 61010-1, IEC 61010-2-020 and 61010-2-101, IEC 61326-1, IEC 61326-2-6.

INTRODUCTION

The MarkEn Refrigerated Centrifuge is a high-performance solution for the centrifugation of temperature-sensitive materials, widely used in research and clinical settings, including biotechnology, medical laboratories, blood banks, and pharmaceutical facilities. Designed for whole blood centrifugation, it enables precise separation of packed red cells, platelet-rich plasma, platelet concentrate, buffy coat, cryoprecipitate, and other blood derivatives.

Equipped with a microprocessor-controlled system and user-friendly software, the centrifuge allows easy parameter control via RPM (speed) or RCF (g-force), eliminating manual calculations. Its brushless induction drive motor is housed in a PUF-insulated, corrosion-free stainless steel chamber, ensuring minimal vibration and noise. Smooth acceleration and deceleration profiles enhance separation quality and maintain sample integrity.

Advanced features include specially designed wind-shielded rotors for reduced friction and optimized temperature management, as well as an imbalance sensor for safe and reliable operation. With its robust design and precision engineering, the MarkEn Refrigerated Centrifuge delivers exceptional efficiency and consistent results, making it indispensable for modern laboratories and healthcare facilities.

KEY FEATURES

PERFORMANCE & RELIABILITY

Designed for tropical climates, ensuring reliable operation in hot and humid environments.

Minimal noise and vibration even at highest speeds and set temperatures, maintaining sample integrity and extending component lifespan.

Minimum lifespan of 10 years with assured spare parts availability.

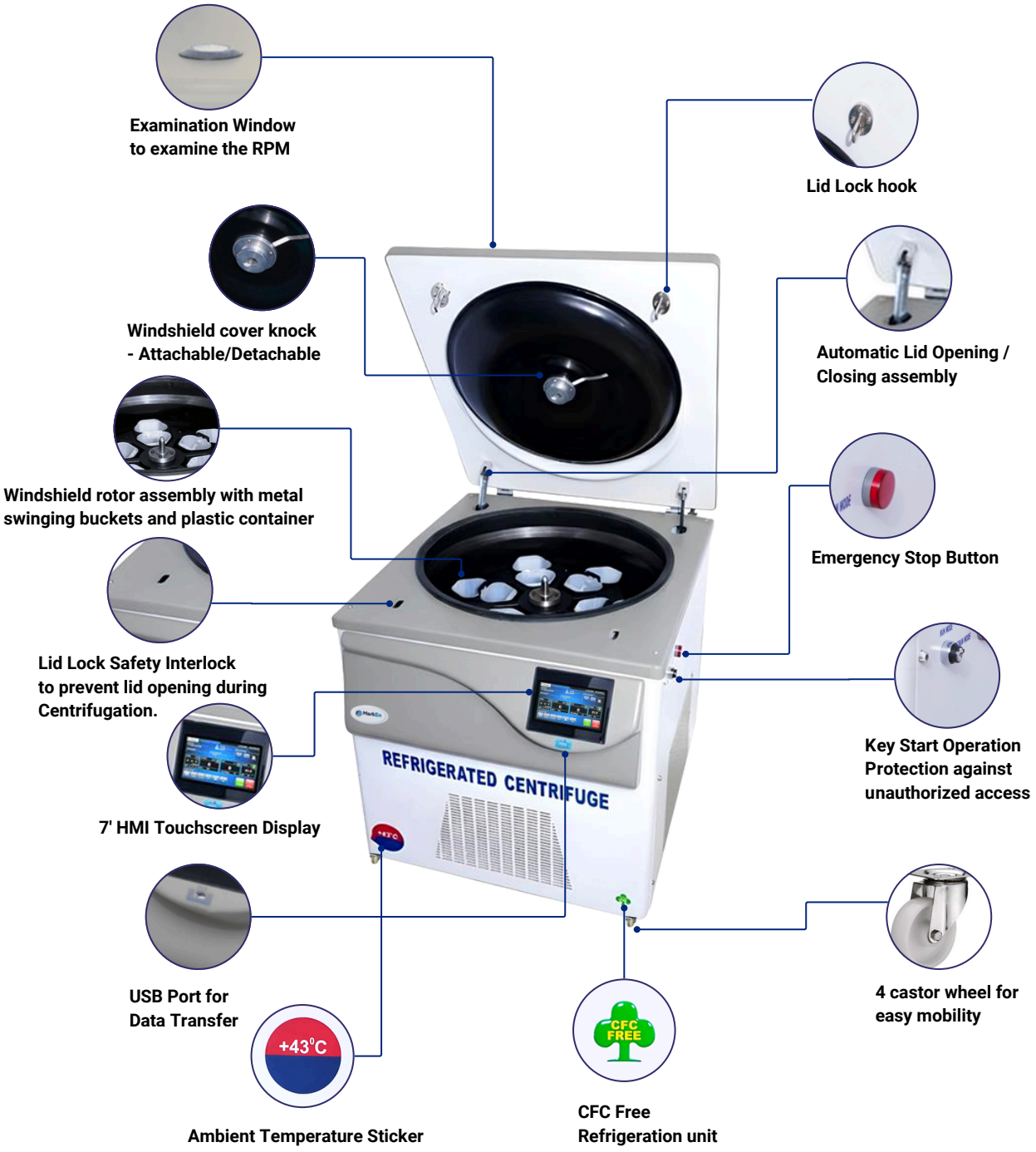
SAFETY & PROTECTION

Automatic rotor detection and design adjustment prevent overspeeding and accidental damage.

Tamper-proof program ensures protocols remain unalterable for high security and consistency.

Rotor cycle counter with alarm alerts when the rotor's operational life ends, preventing failures and minimizing sample damage.

Emergency manual lid opening with an easy thread-pull mechanism.



TECHNOLOGY

SAFETY & PROTECTION

Stores and recalls over 120 user programs, including time, RPM, g-force, and temperature settings.

Tamper-proof programming ensures consistent protocols.

PRECISION AND PERFORMANCE

Ensures reproducible results by automatically adjusting centrifugal force, whether the rotor runs at full or partial capacity.

Microprocessor-controlled rotor temperature maintained within ±1°C.

Provides 10 smooth acceleration and 10 deceleration profiles, including coasting, for optimal separation and high-quality component yield.

DATA MANAGEMENT

Stores run data and transfers it to a PC via dedicated data management software.

Retains stored data for up to three weeks in case of power outage or failure.

ADVANCED SCHEDULING AND TIMING

Pre-set time feature schedules centrifuge processes in advance, enhancing workflow efficiency.

Flexible timer modes allow runs to start at the beginning, at speed, or at a specific time.

Extended run time range from 0 to 99 hours, 58 minutes, and 59 seconds, with a HOLD function.

SMART SAFETY AND AUTOMATION

Automatic rotor identification prevents overspeeding and displays guided alerts.

Automatic recovery function resumes processes after power failures, minimizing sample loss.

Step run facility supports over 25 programmable variations in RPM, temperature, acceleration, and deceleration, displayed in a graphical curve format.

EFFICIENCY

Rapid component separation ensures any type of blood component is separated in less than an hour.

This advanced technology ensures precision, reliability, and ease of operation, meeting the demands of modern laboratory and clinical workflows.

CONSTRUCTION

Robust Design: Built with an all-steel body and a stainless-steel rotor chamber, the centrifuge ensures exceptional stability, durability, and resistance to corrosion. Its easy-to-clean surface minimizes contamination risks, supporting a hygienic environment and enhancing long-term reliability.

User-Friendly Maintenance: Designed for convenience, the centrifuge features a drain port-plug, a no-leak pipe, and a condensed water collection container, making cleaning simple and efficient while reducing contamination risks.

Efficient Heat Dissipation: Strategically placed warm air outlets on the sides and rear of the centrifuge facilitate effective heat dissipation, preventing overheating and maintaining a stable operating temperature.

Enhanced Cleanability: The absence of a rotor windshield allows thorough and easy cleaning of the chamber, ensuring a consistently hygienic environment for samples.

Quick Calibration Access: A specialized eyelet window enables fast and easy calibration, saving time and effort while ensuring accurate and reliable centrifuge performance.

This construction seamlessly combines durability, ease of maintenance, and operational efficiency, making it a dependable choice for laboratories and research facilities.

VERSATILE ACCESSORIES

Swing-Out Rotor: Fits up to twelve 350 ml or 450 ml blood bags, supporting single to quintuple bags with SAGM and in-line filter systems.

Removable Plastic Inserts: Built-in hook adapters and soft filters with side balancing weight slots for bag protection.

Smooth-Edge Adapters: Specially designed for 450 ml quadruple blood bag systems with soft filters.

Balancing Weights: Two plates (35 g and 65 g) for precise weight balancing.

Operation Support: Quick-start manual and onboard tutorial videos for easy setup and maintenance.

Additional Accessories: Weights, balancing plates, and hook adapters for small-volume samples like cord blood and buffy coat.

Voltage Stabilizer: 5/10 KVA servo-controlled stabilizer for consistent power performance.

Power Backup: Optional UPS for uninterrupted operation.

REFRIGERATED CENTRIFUGE CAPACITY
6 Bags
8 Bags
12 Bags

TECHNICAL SPECIFICATIONS	
Make	MarkEn
Max. speed RPM	4500 RPM with speed holding accuracy +10 RPM.
Max. speed RCF	RCF 7000 x g with programmable 1xg
Type of Motor	Maintenance free brushless induction motor with frequency drive
Refrigerant	CFC free Green Refrigerant
External Dimension in mm	813 x 1015 x 973 (W x D x H) mm
Chamber	Easy to Clean Corrosion resistance Stainless Steel Chamber
Control System	7-inch-wide touch screen digital display (user can used with Gloved hand) with programmable microprocessor controlled located on the front panel fort for enables users to quickly and easily access and adjust settings, making operation of the centrifuge.
Display Functions	Provides real-time information on run status, programmed settings, temperature, acceleration and deceleration rates, RPM, RPF (4-digit), time, and total RCF force applied. Includes self-diagnosis for program errors and visual alerts in an enlarged display format.
Safety Features	Centrifuge's user access control with password protection ensures that only authorized personnel can operate the device with various safety features, such as automatic shut-off in case of excess imbalance, overheating of rotor compressor, provide an additional layer of protection. The safety key lid lock, interlock, and door safety sense features prevent accidents and unauthorized use.
Operating Temperature	+4°C to + 22°C with accuracy of 1°C.
Ambient Temperature	Designed for tropical environments, capable of operating between -10°C and +43°C with relative humidity up to 95%.
Castors Wheels	Equipped with 4 castor wheels (2 lockable) for easy mobility and floor-standing jacks for vibration-free operation.
Audio & Visual Alarm	Unwanted temperature rise, Sudden power failure, Imbalance Detection with Automatic Shut Down, Lid (Door) Movement, Over Heating of Rotor and Compressor, High-low voltage cut off, overload, Hand short circuit protection
Data Logging	On-board real-time data logging with connectivity options via RS485/USB/LAN ports for data management.
Power consumption per Hour	15 Watts
Battery Backup (optional)	Battery backup for Display and Door Open in case of Power Failure
Maximum Noise level	≤ 55 dB (measured at 1 meter distance)
Weight	360 Kg
Power supply	220-240V AC, 50Hz Single Phase power supply
Power Cord	2-meter long power cord with Indian-grade 15 Amp plug

MarkEn
The Mark of Excellence

ALL-IN-ONE SOLUTION FOR

Cold Chain Solution
Medical Equipment
Blood Bank Equipment
Hospital & Scientific Equipment
Hospital Furniture & Infrastructure
Commercial Refrigeration

25+
Years of Excellence

400+
Product Range

500+
Service center

1000+
Committed Engineers

1,00,000+
Satisfied Users

CERTIFICATION

World Health Organizaton
Performance Quality Safety
10 products tested by a WHO-PQS accredited laboratory

Intertek

UL

ISO 14001: IAF

WHO GMP

BIFMA Certified, BIFMA Level 3

ASTM- Corrosion Free Products

ISO 2409

EN 13523-26, ISO 13849-1, IP 69, IP 65

& MANY OTHER...

OUR ESTEEMED CUSTOMERS

& MANY MORE...

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